IV. REMARKS

This amendment is responsive to the Office Action dated March 07, 2006. The examiner objected to the abstract. A new abstract is provided on a replacement sheet appended hereto. The replacement sheet overcomes the rejection. The Examiner objected to the drawings. Provided herewith are formal drawings that overcome the objection. No substantive changes to the drawings have been made.

Claim 30 has been rejected under 35 U.S.C. 112, second paragraph, as being indefinite. The Applicants disagree. Claim 30 recites the container according to claim 28, wherein the motor portion is adapted to cooperate with the other motor portion for driving the container in crossing directions relative to the track. Claim 28 recites a motor portion mounted to the frame, the motor portion being adapted to cooperate with another motor portion of the transport system for driving the container along the track. Claim 30 adds that the motor portion is adapted to cooperate with the other motor portion for driving the container in crossing directions relative to the track. The test for definiteness under 35 U.S.C. §112, second paragraph is whether a person skilled in the art would understand the claim language in light of the specification and drawings. Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 1 USPQ2d 1018 (Fed. Cir. 1986). Definiteness of claim language must be analyzed, not in a vacuum, but in light of the content of the application disclosure (see MPEP 2173.02). There is nothing contradictory or confusing in the language of claim 30. Furthermore, one skilled in the art would clearly understand the claim language in light of the drawings (see Figs. 2 and 7A),

and specification (see page 25, line 27 through page 27, line 33).

Claim 30 is not indefinite, and the rejection should be withdrawn.

Claim 43 has been rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claim 43 is amended to overcome the rejection.

Claim 44 has been rejected under 35 U.S.C. 102 as being anticipated by Bonora. The Applicants disagree. Claim 44 recites a material handling system with a drive track, wherein the drive track is modular with modules adapted to be joined together to form extended lengths of the drive track during drive track installation. Claim 44 also recites track elements interfacing with a container for driving the container, and that each module has at least one of the track elements thereon. Bonora discloses a conveyor system 10 that includes a pair of rails 12, 14 (Fig. 1). The rails support a transport pod 8 as the pod is moved along the rail. Rail 14 is an idler rail with the sole function of supporting the transport pod. The other rail 12 is a drive rail. As seen in Fig. 4 of Bonora, the drive rail includes a drive system 38 with several drive assemblies 40. Each drive assembly has several drive wheels 42, which frictionally engage the underside of a transport pod to move the pod. A drive belt 46 connects the several drive wheels 42 to a motor 48 for each drive assembly. Thus, within each drive assembly the wheels are driven in unison by the drive belt. Bonora does not disclose anywhere that the rails 12, 14 are modular, with each module having at least one of the track elements thereon for driving the container, as otherwise called for in claim 44. Nor are these features inherent in Bonora

(i.e. necessary) from what is expressly disclosed. On the contrary, it appears that the rails 12, 14 shown in Bonora may be non-modular drive train assembly units. In other words, the components that form the lengths of the rails 12, 14 are not drive track modules where each module has at least one of the track elements thereon. In Fig 2 of Bonora, rails are shown at angles to each other. For example, cross sections 20 are shown perpendicular to other track sections. However, the disclosure in Bonora of rails at angles to each other does not necessarily mean that the drive rails are modular. There is nothing disclosed in Bonora that makes it necessary that the rails be modular with each module having track elements interfacing with the container for driving the container, wherein the drive track is modular with modules adapted to be joined together to form extended lengths of the drive track during installation. Because Bonora does not disclose all of the features recited in claim 44, the rejection should be withdrawn.

The Examiner has rejected Claims 1, 15-18, 20, 34, 35, 39, and 40 under 35 U.S.C. 103(a) as being unpatentable over Bonora in view of Lin. Claim 1 recites a second transport section that has a motor connected to the second track for aligning the container on the second track with the transport vehicle on the first track. As discussed above, Bonora shows rails 12, 14 supporting a tranport pod 8. The tranport pod is moved along the rails by multiple drive assemblies 42. Each drive assembly has several wheels that are connected via a drive belt 46 to a motor 48. The wheels engage the bottom of the transport pod to propel the pod. Bonora does not disclose the motor aligning a transport pod to a transport vehicle on another track. Bonora discloses that the rails 12, 14 are divided in the lengthwise direction into a plurality of zones, with each zone having one

or more of the drive assemblies 40 (col. 8 lines 5-11). Sensors 53 detect when a pod 8 enters one of the zones and also when the pod leaves one of the zones. Data from the sensors 53, indicating the entry or exit of a pod 8 from a zone, is used to activate downstream drive zones so that wheels in downstream zones are active and operating at the same speed as the previous zone when the pod 8 reaches the zone (Fig. 6; col. 8 lines 56-64). So in Bonora the position of a pod is not tracked within a zone, and there is no disclosure of how the motor 48 can position a pod to align the pod with a vehicle on another track.

The Lin reference discloses an interbay transfer interface 50 (Fig. 3). A vehicle 36 rides on a track 38 and may carry a FOUP 44. A conveyor belt 52, located beneath track 38, supports a plurality of open-top containers 60 for accepting a FOUP into a cavity 62 of the container. Locating pins 54 are provided on the conveyor belt 52 to locate both the open-top container 60 and as well as a FOUP inside the container. Lin does not disclose any motor connected to the belt 52 for aligning a container on the belt with a transport vehicle 36 on track 38. Rather, Lin merely discloses that the containers 60 can accept a FOUP from the vehicle 36. It is certainly not inherent from Lin that the containers 60 are aligned to the vehicle 36 by a motor driving the containers, as it is quite possible that it is the vehicle 36 that is moved to align with the containers 60.

Firstly, one skilled in the art would not be motivated to combine the systems taught by Bonora and Lin. Even if the references can be combined, the mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the references also suggest the desirability of

the combination. In re Mills, 16 USPQ2d 1430 (Fed. Cir. 1990) (see also MPEP 2143.01). The Bonora and Lin systems are quite disparate and function differently. There is no suggestion of the desirability of combining the references. In fact, the disparate natures of the Bonora conveyor system 10 and the Lin belt 52 would suggest otherwise. For example, the locating pins 54 of Lin, which locate the FOUP, are simply incompatible with the Bonora system. In Lin the pins are used to fix the position of the FOUP relative to the belt 52. Bonora does not even have such a belt, but rather uses a completely different approach in transporting the pods, namely propelling a pod along a track by using wheels that are spaced along the track. There would not have been a motivation to combine the references, and this alone should be sufficient for the Examiner to withdraw the rejection.

Secondly, the rejection should be withdrawn because the references do not disclose all of the features of claim 1. Bonora does not disclose the drive assembly motor 48 as being capable of aligning the transport pod 8 to another device. Therefore even if one were motivated to provide the system of Lin, with the conveyor system 10 of Bonora substituted for the belt 52, this would not result in a system having a second transport section that has a motor connected to a second track for aligning the container on the second track with the transport vehicle on the first track, as otherwise recited in claim 1. As previously noted, Lin also fails to disclose a motor connected to a second track for aligning the container on the second track with the transport vehicle on the first track, as Lin does not disclose a motor moving the belt 52 to align a container 60 on the belt with the overhead transport vehicle 36. Because the combination of references does not disclose all of the features of claim 1, and because there would not have been a

motivation to combine the references, the rejections of claims 1-20 should be withdrawn.

Claim 34 recites a second transport section that has one motor connected to the second track, the one motor being capable of bi-directionally driving the containers substantially simultaneously on at least a portion of the second track. As described above, Bonora discloses a drive rail 12 with several drive assemblies 40. Each drive assembly has several drive wheels 42, which are driven in unison via a drive belt 46 coupled to a motor 48. Each motor can transport a pod 8 in only one direction at a time. Therefore, Bonora does not disclose a transport section, which is not vehicle based, with one motor connected to the second track, the one motor being capable of bi-directionally driving the containers substantially simultaneously on at least a portion of the second track, as recited in claim 34. In Lin, the FOUPS are transported by the conveyor belt when located within one of the open-top containers 60. Thus, if multiple FOUPS are on the belt 52, they can only be moved by the belt in the same direction and at the same rate of speed. Lin does not disclose a transport section, which is not vehicle based, with a motor connected to the second track capable of bi-directionally driving the containers substantially simultaneously on at least a portion of the second track, as recited in claim 34. As neither reference discloses these features of claim 34, the rejection of claims 34-38 should be withdrawn.

Claim 39 recites a first transport section having a first track and a transport vehicle movably supported from the first track and capable of picking a container. Claim 39 further recites a second transport section having a conveyor track with a motor

connected to the conveyor track for moving the container on the track. The motor is adapted for stopping the container at any location along a portion of the conveyor track so that the container is in a predetermined position relative to the transport vehicle for providing a pickplace for the vehicle to pick the container. As discussed above, Lin shows an overhead transport track 38 with a vehicle 36 thereon, positioned above a conveyor belt 52. The conveyor belt can accept FOUPS from the overhead vehicle within open-top containers 60. Lin does not disclose stopping the container at any location along a portion of the conveyor track so that the container is in a predetermined position. Lin does not even disclose stopping at a single location so that the container is in a predetermined position relative to a transport vehicle. Rather, Lin merely states that the container can accept a FOUP from the transport vehicle 36, without stating how this is accomplished. Bonora shows pods 8 driven along rails 12, 14 by wheels 42. The rails are divided in the lengthwise direction into a plurality of zones, with each zone having one or more of the drive assemblies 40 (col. 8 lines 5-11). Bonora discloses sensors 53 for detecting when a pod 8 enters one of the zones and also when the pod leaves one of the zones. Data from the sensors 53, indicating the entry or exit of a pod 8 from a zone, is used to activate downstream drive zones so that wheels in downstream zones are active and operating at the same speed as the previous zone when the pod 8 reaches the zone (Fig. 6; col. 8 lines 56-64). The conveyor system 10 of Bonora does not have a motor adapted for stopping a container at any location along a portion of the conveyor track so that the container is in a predetermined position, as recited in claim 39.

The Examiner argues that combining Lin with Bonora, by providing the device of Bonora with the overhead transport of Lin, would result in a device with all of the features of claim 39. This is not correct. The conveyor system 10 of Bonora does not have a motor adapted for stopping a container at any location along a portion of the conveyor track so that the container is in a predetermined position, as recited in claim 39. In contrast, Bonora only detects entry and exit of pods from the various zones. The system of Bonora does not track the position of a pod within a zone so that it can be stopped at any predetermined position. Rather, Bonora relies on the sensors 53 to detect entry any exit of pods and to trigger the activation of downstream drive assemblies. It is clear that Bonora does not disclose stopping a container at any location along a portion of the conveyor track so that the container is in a predetermined position, as recited in claim 39. The combination suggested by the Examiner would therefore not have all of the features of claim 39. Furthermore, neither Bonora nor Lin suggest any combination of the references. As discussed above, the devices of Bonora and Lin are very disparate and function in different, mutually incompatible ways. Claims 39-43 are patentable over the combination of Bonora and Lin, as Bonora and Lin neither suggest a combination nor teach all of the features of claim 39. The rejections of claims 39-43 should be withdrawn.

The Examiner has rejected claims 21-26 and 28-33 under 35 U.S.C. 103(a) as being unpatentable over Bonora in view of Belna. The Applicants disagree. Claim 21 recites a semiconductor workpiece container transport system. The system comprises at least one semiconductor workpiece container having a one-piece frame assembly. The system further comprises a track for movably supporting the at least one container so that the at least one

container is capable of moving along the track. A motor is connected to the track for moving the at least one container along the track, and at least a part of the motor is mounted to the frame assembly of the at least one container. Claim 28 recites a container comprising a motor portion mounted to a frame, the motor portion being adapted to cooperate with another motor portion of a transport system for driving the container along a track. The Bonora reference has been described above. Bonora does not disclose a motor connected to a track for moving a container along the track, wherein at least a part of the motor is mounted to a frame assembly of the at least one container, as recited in claim 21. Nor does Bonora disclose a container comprising a motor portion mounted to a frame, the motor portion being adapted to cooperate with another motor portion of a transport system for driving the container along a track, as recited in claim 28. Belna discloses a semiconductor wafer transportation mechanism 10 (Fig. 1). The mechanism includes a track 12. A car 14 rides on the track 12 and has a U-shaped fork 20 for supporting a semiconductor wafer on top of the fork (col. 3 lines 49-54). Permanent magnets 42 in the car interact with a series of electromagnetic coils 40 supported on the track. The coils are sequentially energized to move the car along the track (col. 3 lines 3-20). Wafers may be transferred between cars by levitating a car holding a wafer and lowering the wafer onto another car. This is used to transfer individual wafers between track sections (col. 3 line 49 - col. 4 line 1). The Examiner states that it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the device of Bonora with the linear drive as taught by Belna. The Examiner states that one would modify the Bonora system in this manner in order to move a carrier while limiting the amount of wear debris generated so as to maintain facility

cleanliness at acceptable levels. It is not correct that one of ordinary skill in the art would be so motivated. It would not be obvious to combine the references because the systems of Bonora and Belna have different functions. The Bonora system is an intertool system for transporting pods between various tools. In contrast, the Belna system transports individual wafers within of a tool. It would not be obvious to one skilled in the art to combine Bonora and Belna, because the references address separate functions. One aspect of their disparate functions is that within a tool precise wafer positioning is generally required, but this is not so in an intertool transport system such as that of Bonora. Hence the Bonora system only senses the entry and exit of pods from the various zones (e.g. to prevent collisions), but does not precisely position the pods. In other words, Bonora is concerned with transporting wafers from one location to another location, whereas Belna is concerned with precisely locating a wafer as required for functioning of the tool within which the system operates. Furthermore, if one were to combine Bonora and Belna, the Belna system would be rendered inoperable. Bonora discloses a pod 8 supported by wheels 42. Eliminating the wheels of Bonora to provide a linear drive as in Belna would leave the pod unsupported, rendering the device unusable. Claims 21-26 and 28-33 are patentable over the combination of Bonora and Belna. The rejections should be withdrawn.

Each of the independent claims 1, 21, 28, 34, 39 and 44 are patentable over the prior art of record for the reasons discussed above. While each of the dependent claims contains its own patentable subject matter, each dependent claim should also be allowable at least because it depends from one of the allowable independent claims. Accordingly, to expedite

prosecution at this time, no further comment on these claims will be made.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

A petition for a one-month extension of time under 37 CFR 1.136(a) is enclosed herewith, along with a check in the amount of $120.00 for the required fee. The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

7/7/06

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